The New Star in Orion photometrically and spectroscopically observed at the Oxford University Observatory. By Prof. C. Pritchard, D.D., F.R.S.

Date of Observation.	Mag. of Nova when compared with *Polaris* =2·05.	57 *Orionis* =6·03.	Adopted Mean Mag. of Nova.	Notes.
1885.				
Dec. 23	6·49	6·43	6·46	
28	6·42	6·42	6·42	Fine night.
29	6·45	6·32	6·39	Very fine night.
1886.				
Jan. 2	6·47	6·39	6·43	Fine night; slight fog.
5	6·71	6·76	6·74	Fine night.
8	6·80	6·63	6·72	Fine night; but bad definition.
11	6·69	6·74	6·72	Fine night; haze low down.
18	6·92	6·83	6·87	Sky very fine.
26	6·77	6·90	6·82	Fine night.
Feb. 7	7·02	6·86	6·94	Bad definition; fine night.
23	6·93	7·13	7·03	Very fine night.
March 9	7·22	7·05	7·14	Fine nights; with low definition.
10	7·05	7·13	7·09	

Colour and Spectrum.—On December 23 the colour of the star was noted to be red-orange; spectrum columnar and four bands noticeable with Vogel eyepiece spectroscope. On December 29, in better definition, two other bands were seen in the red. On January 8 bright lines were specially looked for, but it was impossible to say whether any definite bright lines existed. The red colour has diminished considerably during the time the star has been watched, and is now not at all conspicuous.

I think that as far as the foregoing magnitude of the *Nova* are concerned, the accuracy is considerable; the main result being that from the time of its first observation here to the present, the star has decreased in brightness by about half a magnitude, viz. about 6·5 to 7·0 mag.

With regard to perhaps the more important question of the character of the spectrum, what is said above—viz. that it is seen here with six bands—must be read with the limitations due to the character of the small spectroscope employed; the larger and more delicate instrument belonging to the Observatory being at present at Greenwich. Still even with the largest forms of spectroscopes at the Royal Observatory and at Dun Echt the apparently contradictory results are perplexing.

Oxford University Observatory:
March 11, 1886.

Observations of the New Star in Andromeda, made at Mr. Wigglesworth's Observatory with the 15·5-inch Cooke Refractor. By J. Gerh. Lohse.

When the intelligence of the discovery of the new star in *Andromeda* was received, it was determined to connect the star micrometrically with some neighbouring stars, to compare its brightness with that of suitable stars, and to examine the spectrum as far as the instruments might allow.

The micrometric observations were made with a micrometer kindly lent by Lord Crawford. It was constructed by Merz, possesses only one micrometer screw, and has three movable wires and a set of fixed wires. A fine movement can be given to the whole micrometer by two screws in the adapter—an arrangement which has proved very convenient.

The observations of the old nucleus and of the 11th mag. star in the nebula are given singly; in the case of the other stars, however, the final result only is given. The corrections for refraction have been applied.

Measures of the Old Nucleus from the New Star.

1885.	Pos.	Dist.
Sept. 3	76°·50	16″·12
4	75·46	15·73
6	*	16·59
6	77·10	16·22
6	74·80	17·24
9	75·60	16·02
29	76·30	16·48
	75·96	16·343

$\Delta\alpha = +1^{s}\cdot393$ $\Delta\delta = +3''\cdot96$

1885.	Pos.	Dist.
Nov. 30	*	15″·21
	76°·12	14·94
	76·24	14·95
	76·18	15·033

$\Delta\alpha = +1^{s}\cdot283$ $\Delta\delta = +3'\cdot59$

* The first settings in Pos. on Sept. 6 and Nov. 30 were rejected at the telescope.